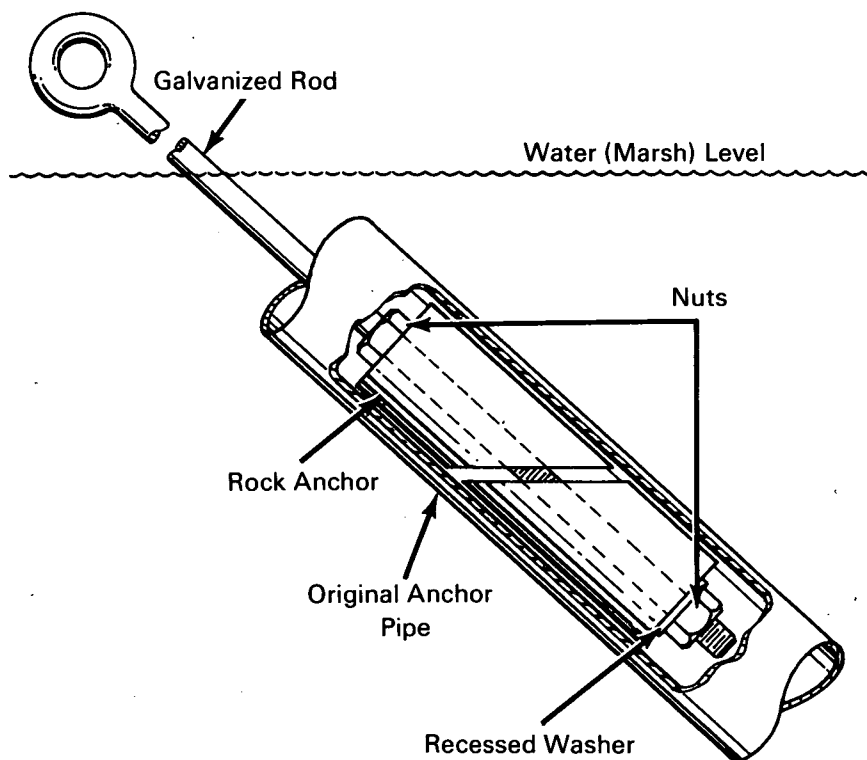


# NASA TECH BRIEF



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## Rock Anchors Restore Broken Swamp Anchors Economically



### The problem:

In the construction of a power transmission system across coastal swamp and marsh land, the supporting line poles must be guyed effectively to support them against the periodic storms that occur. Swamp anchors, consisting of steel plates secured at the ends of 2-inch diameter pipes are screwed into the marsh land to depths of 25 to 90 feet. In time the exposed portion of pipe at the surface becomes corroded by salt action and fails. In the past, a new complete swamp anchor has been installed beside the failed one.

### The solution:

A rock anchor that is installed within the upper portion of the pipe that remains attached to the original swamp anchor.

### How it's done:

The rock anchor is fastened to the threaded end of a 6-foot long galvanized rod and then inserted into the exposed open end of the pipe secured to the original swamp anchor. The galvanized rod is then rotated to force a recessed washer against the rock, causing it to expand against the inner walls of the pipe. When

(continued overleaf)

sufficient compression is achieved, the guy wire is attached to the eye at the free end of the galvanized rod.

**Notes:**

1. Tests indicate this device can withstand 3000 pounds of tension without failure.
2. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer  
Wallops Station  
Wallops Island, Virginia  
Reference: B67-10498

**Patent status:**

No patent action is contemplated by NASA.

Source: Joseph W. McAllister  
(WLP-10004)